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AMENDMENTS TO THE CLAIMS

The following list of claims supersedes and replaces any previous listing of claims.

Claims 1-11 (Cancelled)

12. (Currently amended) ~~The method of Claim 1,~~ A method of assigning at least a portion of the radio frequency (RF) spectrum among at least one of a plurality of RF transmitters and RF receivers, the method comprising:

monitoring a communication parameter that relates to performance of a group within the plurality of RF transmitters and receivers, the group comprising at least one of the plurality of RF transmitters and receivers;

determining, in response to the monitored communication parameter, a state of performance of the group; and

allocating at least a portion of the RF spectrum from the group having best state of performance to at least one of the plurality of RF transmitters and receivers, wherein determining the state of performance of the group includes determining length of data queue of the group.

13. (Previously presented) The method of Claim 12, wherein allocating at least a portion of the RF spectrum from the group having the best state of performance includes allocating a portion of the RF spectrum from the group having the smallest length of data queue.

14. (Currently Amended) ~~The method of Claim 1~~ A method of assigning at least a portion of the radio frequency (RF) spectrum among at least one of a plurality of RF transmitters and RF receivers, the method comprising:

monitoring a communication parameter that relates to performance of a group within the plurality of RF transmitters and receivers, the group comprising at least one of the plurality of RF transmitters and receivers;

determining, in response to the monitored communication parameter, a state of performance of the group; and

allocating at least a portion of the RF spectrum from the group having best state of performance to at least one of the plurality of RF transmitters and receivers, wherein allocating at least a portion of the RF spectrum from the group having best state of

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performance includes allocating a portion of the RF spectrum from the group for which data traffic is least congested.

15. (Previously Presented) A method of allocating at least a portion of the radio frequency (RF) spectrum among a plurality of RF transmitters, the method comprising:

monitoring demand of a group of transmitters within the plurality of RF transmitters, the group comprising at least one RF transmitter;

determining, in response to the monitored demand, relative data congestion of the group of transmitters; and

allocating at least a portion of the RF spectrum from the group having least amount of congestion to at least one other RF transmitter.

16. (Previously Presented) The method of Claim 15, further comprising adjusting demand of each of the transmitters of the group based, at least in part, on quality of service of each of the transmitters of the group.

17. (Previously Presented) The method of Claim 16, wherein adjusting demand of each of the transmitters of the group includes granting at least a portion of the demand of each of the transmitters of the group.

18. (Previously Presented) The method of Claim 17, further comprising determining aggregate demand of the group based, at least in part, on the adjusted demand of each of the transmitters of the group.

19. (Previously Presented) The method of Claim 15, wherein monitoring demand of the group of transmitters includes receiving information representing the amount of data that each of the transmitters of the group requests to exchange.

20. (Previously Presented) The method of Claim 15, wherein determining relative data congestion of the group of transmitters includes identifying the group with the smallest length of data queue.

21. (Previously Presented) The method of Claim 20, wherein allocating at least a portion of the RF spectrum includes assigning a portion of the RF spectrum from the group of transmitters having the smallest length of data queue to at least one other RF transmitter.

22. (Previously Presented) The method of Claim 15, further comprising comparing length of data queue of the group of transmitters with length of data queue of another group of transmitters.

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23. (Previously Presented) The method of Claim 15, further comprising monitoring demand of at least one other group of transmitters within the plurality of RF transmitters, the group comprising at least one RF transmitter.

24. (Previously Presented) A communication receiver that receives radio frequency (RF) signals from a plurality of RF transmitters, the communication receiver accessing a processor that is programmed with instructions that when executed perform a method comprising:

monitoring demand of a group of transmitters within the plurality of RF transmitters, the group comprising at least one RF transmitter;

determining, in response to the monitored demand, relative data congestion of the group of transmitters; and

allocating at least a portion of the RF spectrum from a group having a least amount of congestion to at least one other RF transmitter.

25. (Previously Presented) The receiver of claim 24, wherein the method further comprises adjusting demand of each of the transmitters of the group based, at least in part, on quality of service of each of the transmitters of the group.

26. (Previously Presented) The receiver of Claim 25, wherein adjusting demand of each of the transmitters of the group includes granting at least a portion of the demand of each of the transmitters of the group.

27. (Previously Presented) The receiver of Claim 26, wherein the method further comprises determining aggregate demand of the group based, at least in part, on the adjusted demand of each of the transmitters of the group.

28. (Previously Presented) The receiver of Claim 24, wherein monitoring demand of the group of transmitters includes receiving information representing the amount of data that each of the transmitters of the group requests to exchange.

29. (Previously Presented) The receiver of Claim 24, wherein determining relative data congestion of the group of transmitters includes identifying the group with the smallest length of data queue.

30. (Previously Presented) The receiver of Claim 29, wherein allocating at least a portion of the RF spectrum includes assigning a portion of the RF spectrum from the group of transmitters having the smallest length of data queue to at least one other RF transmitter.

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31. (Previously Presented) The receiver of Claim 24, wherein the method further comprises comparing length of data queue of the group of transmitters with length of data queue of another group of transmitters.

32. (Previously Presented) The receiver of Claim 24, wherein the method further comprises monitoring demand of at least one other group of transmitters within the plurality of RF transmitters, the group comprising at least one RF transmitter.

Claim 33 (Cancelled)

34. (Currently amended) ~~The method of Claim 33~~ A system for allocating at least a portion of the radio frequency (RF) spectrum among a plurality of RF transmitters, the system comprising:

a plurality of RF transmitters each configured to transmit data representing respective demand to communicate data; and

a receiver in communication with the plurality of RF transmitters, the receiver being configured to monitor the demand of a group within the plurality of RF transmitters, the group comprising at least one RF transmitter, wherein the receiver is further configured to re-allocate a portion of the RF spectrum from the group of RF transmitters having smallest demand to at least one other RF transmitter, wherein each RF transmitter is configured to periodically transmit data representing the respective demand to the receiver over a dedicated RF channel.

Claims 35-42 (Cancelled)

43. (Currently amended) The system of Claim ~~41~~ 34, wherein the receiver is configured to measure a signal-to-noise ratio of the dedicated RF channel of at least one of the plurality of RF transmitters and assign an increased data rate to the at least one of the plurality of RF transmitters in the event that the measured signal-to-noise ratio is above a predetermined threshold.

44. (Currently amended) The system of Claim ~~41~~ 34, wherein the receiver is configured to measure a signal-to-noise ratio of the dedicated RF channel of at least one of the plurality of

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RF transmitters and assign a reduced data rate to the at least one of the plurality of RF transmitters in the event that the measured signal-to-noise ratio is below a predetermined threshold.

45. (Currently amended) The system of Claim 44 34, wherein the receiver is configured to measure a signal-to-noise ratio of the dedicated RF channel of at least one of the plurality of RF transmitters and maintain a currently assigned data rate for the at least one of the plurality of RF transmitters in the event that the measured signal-to-noise ratio is within a predetermined range.

Claim 46 (Cancelled)

47. (Currently amended) The system of Claim 46 34, wherein the receiver is configured to reallocate the portion of the RF spectrum in a stepwise manner by a predetermined amount of bandwidth.

Claim 48-58 (Cancelled)

59. (Currently Amended) The system of Claim 5£ A communication system programmed with instructions that when executed by a processor perform a method of assigning at least a portion of the radio frequency (RF) spectrum among at least one of a plurality of RF transmitters and RF receivers, the method comprising:

    monitoring a communication parameter that relates to performance of a group within the plurality of RF transmitters and receivers, the group comprising at least one of the plurality of RF transmitters and receivers;

    determining, in response to the monitored communication parameter, a state of performance of the group; and

    allocating at least a portion of the RF spectrum from the group having best state of performance to at least one of the plurality of RF transmitters and receivers, wherein determining the state of performance of the group includes determining length of data queue of the group.

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Claim 60-65 (Cancelled)

66. (Previously Presented) A system for allocating at least a portion of the radio frequency (RF) spectrum among a plurality of RF transmitters, the system comprising:

means for monitoring demand of a group of transmitters within the plurality of RF transmitters, the group comprising at least one RF transmitter;

means for determining, in response to the monitored demand, relative data congestion of the group of transmitters; and

means for allocating at least a portion of the RF spectrum from the group having least amount of congestion to at least one other RF transmitter.

Claim 67 (Cancelled)

68. (Previously Presented) A method of assigning a portion of the radio frequency (RF) spectrum among a plurality of transmitters, the method comprising:

monitoring demand of at least first and second groups of transmitters, the first group operating at an average data rate that is different than the data rate of the second group of transmitters;

adjusting the demand of each of the at least first and second groups of transmitters based at least in part on a quality of service that is commensurate with each transmitter of the first and second groups of transmitters;

determining, based at least in part on the adjusted demand, the group of transmitters that is least congested;

reducing the size of RF bandwidth that is assigned to the least congested group of transmitters; and

increasing the size of RF bandwidth that is assigned to the other group of transmitters.

69. (Previously Presented) The method as defined in Claim 68, wherein determining the group of transmitters that is least congested includes identifying the group of transmitters that has the smallest data queue.

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Claims 70-71 (Cancelled)